

REMARKS

In accordance with the foregoing, claims 1, 2, 5, 6, 10, and 11 are amended. Claims 19-22 are added. No new matter is added. Claim 3, 4, 8 and 9 are cancelled without prejudice. Claims 1, 2, 5-7, and 11-22 are pending and under consideration.

IDS ACKNOWLEDGEMENT

Applicants respectfully request that the Information Disclosure Statement filed on January 21, 2009 be considered by the Examiner. Applicants also requests that a copy of Form PTO-1449 be signed and returned to indicate that the references cited thereon have been considered.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 1-18 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. 2005/0233173 to Odamura et al. (hereinafter "Odamura") in view of U.S. Patent No. 6,951,027 to Kikuchi et al. ("Kikuchi").

Independent claim 1 is amended herewith to recite that the claimed optical disk has a printing layer and at least one release layer in addition to the previously recited substrate and recording layer. The claim amendments are supported by the originally filed specification, for example FIG. 5 and the corresponding description. No new matter is added.

In view of the claim 1 amendments, claims 3, 4, 8 and 9 are cancelled, and claims 5, 6, 10 and 11 are amended to be consistent with amended claim 1, and to reflect the cancellation of claims 3 and 4. Claim 2 is amended to correct informalities according to U.S. patent claim practice. No new matter is added.

Amended independent claim 1 patentably distinguishes over the principal reference, Odamura, because Odamura does not disclose an optical disk having the structure recited in claim 1.

Odamura discloses an intermediate transfer recording medium wherein a transferable layer which is peelably provided on a substrate, has a multilayered structure including a receptor layer and a peelable layer which is interposed between the receptor layer and the substrate (see Odamura's abstract and claim 1). An image is formed on the receptor layer by thermal transfer, and then the transferable layer is retransferred onto a transfer-receiving material. The transfer-receiving material may be an optical card. However, the transfer-receiving material is not the intermediate transfer recording medium disclosed in Odamura, but merely a "final destination" of

the image.

To summarize, Odamura is not directed to an optical disk, but to a printed product on which an image is printed by thermal transfer.

In contrast, a person of ordinary skill in the art knows that an optical disk is a magneto-optical device that can store digital data as tiny pits etched in its surface and is read with a laser that scans the surface. (See attached the result of a Google search of the term.)

Applicants respectfully submit that a person of ordinary skill in the art would not consider Odamura's teachings as relevant to an optical disk. For example, a person of ordinary skill in the art would understand that the terms "a recording layer" and "a printing layer" in the context of laser reading technology used for optical disks, have a technically different meaning than a peelable receptor layer on which an image is transferred by thermal transfer (see paragraph [0002] of Odamura).

The Office Action admits that Odamura fails to teach an optical disk specifically, but relies on Kikuchi to remedy this failure. The Office Action asserts that "Kikuchi teaches an optical recording medium [...] that could possibly be used in a card type of recording medium as well." Even if Kikuchi discloses what the Office Action asserts it does, Kikuchi and Odamura in combination do not disclose or render obvious an optical disk having a substrate, a recording layer, a printing layer and at least one release layer as recited in claim 1.

Contrary to the position put forth in the Office Action, Odamura fails to disclose "a recording layer provided on one side of the substrate" as recited in claim 1. The Office Action alleges that the recording layer is disclosed in paragraph [0071] of Odamura. The indicated paragraph refers to a transfer-receiving material including resin or emulsion impregnated paper. However, the materials cited in Odamura may be appropriate for an image printed by thermal transfer but are not appropriate for a layer on which digital information is recorded using a laser. A person of ordinary skill in the art knows that in an optical disk a recording layer is a layer on which information is recorded and read from using a laser. The specification confirms that this is the intended meaning on page 12, lines 16-18.¹ Odamura also includes statements consistent with the above understanding of a recording layer on an optical disk (magnetically recording layer) in paragraph [0129]. Therefore, Applicants respectfully submit that considering that materials (layers) on which an image is thermally printed as disclosing or anticipating a recording layer of an optical disk is unreasonable.

¹ Recording layer 13 is a layer on which information is recorded and/or a layer on which information can be recorded, and is able to record and/or read information by being irradiated with light.

None of the cited references, Odamura or Kikuchi alone and in combination, discloses or renders obvious "at least one release layer provided between the substrate and the recording layer and/or between the substrate and the printing layer." Related to original claim 10, the Office Action (see last paragraph on Page 4 of the Office Action) alleges that the peelable layer interposed between the receptor layer and the substrate in Odamura and which facilitates the release of the transferable portion from the substrate (see paragraph [0114] of Odamura) anticipates or renders obvious the claimed release layer. However, the meaning of the term "release" in the case of an optical disk is not to facilitate release of the transferable portion as in the case of a thermally transferable image. As explained on page 20, lines 17-20 of the specification, the release layers aim to aid "separation of each layer during disposal." That is, if there is a release layer between the substrate and the recording layer, the release layer allows separation of the recording layer from the substrate during disposal. Similarly, if there is a release layer between the substrate and the printing layer, the release layer allows separation of the printing layer from the substrate during disposal.

The possibility of separating the printing and/or recording layers from the substrate is significant in the context in which one problem that the claimed disk and method aim to solve is to minimize the effect on the environment during disposal (see page 1, lines 17-21 and page 2, lines 10-12). The peelable layer in Odamura does not produce a similar effect as the claimed release layers of an optical disk.

Kikuchi does not correct or compensate for the above-identified failure of Odamura to disclose or render obvious the features that the Office Action alleges that Odamura discloses. Additionally, as pointed out above combining the teachings of Odamura with Kikuchi does not lead to a working alternative for the claim invention. Odamura merely lists an optical card as a potential final destination (transfer-receiving material) of the thermal transfer. The transfer-receiving material in Odamura does not have an alleged equivalent for the substrate and the recording layer which are part of the intermediate transfer recording medium in Odamura. Kikuchi's teaching that an optical recording medium can be either an optical card or an optical disk does not combine with Odamura's teachings to disclose an optical disk with a structure of the intermediate transfer medium in Odamura.

In view of the above, amended claim 1 and claims 2, 5-7, 10 and 11 patentably distinguish over Odamura and Kikuchi.

Regarding claim 12, Applicants respectfully submit that contrary to the allegations in the Office Action, Odamura does not disclose or render obvious the claimed manufacturing method

for an optical disk. Regarding the recording layer sheet fabrication step, the Office Action relies on (see second paragraph of page 5 of the Office Action) paragraph [0129] of Odamura, which merely states that "an information-reading section made of a magnetically recording layer in which information can be magnetically recorded or read or a recording layer in which information can be optically recorded or read is formed beforehand in the transfer-receiving material to which the intermediate transfer recording medium of the second aspect should be applied." Note that the indicated paragraph refers to a recording layer on the transfer-receiving material.

Further, the Office Action asserts that the recording layer sheet lamination step is anticipated by Odamura's teachings related to the intermediate transfer medium 1. The intermediate transfer medium is a different object than the transfer-receiving material, and Applicants found no evidence that Odamura discloses any lamination manufacturing process related to either the intermediate transfer medium or the transfer-receiving material.

Thus, the Office Action has failed to make a *prima facie* case of obviousness relative to claim 12. Therefore claim 12 and claims 13-18 depending from claim 12 patentably distinguish over the cited prior art.

NEW CLAIMS

New independent claim 19 is directed to an optical disk free of bisphenol A. Claim 19 patentably distinguishes at least by reciting that the optical disk is "free of bisphenol A," and that the substrate of the optical disk is made of resin-impregnated or resin-coated paper. The claim also specifies that the recording layer is a layer on which information is recorded and read from using laser light. Claims 20-22 specify additional features of the optical disk of claim 19 and are patentable by inheriting patentable features from claim 19 and by reciting additional patentably distinguishing features such as the optical disk including "a release layer between the substrate and the recording layer for separation of the substrate and the recording layer during disposal." The new claims 19-22 are supported by the originally-filed specification.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Serial No. 10/543,140

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Definitions of optical disk on the Web:

- a disk coated with plastic that can store digital data as tiny pits etched in the surface; is read with a laser that scans the surface
wordnet.princeton.edu/perl/webwn
- In computing, sound reproduction, and video, an optical disc is a flat, circular disc (usually polycarbonate) wherein data are stored in the pits (or bumps) in its flat surface — sequentially on the continuous, spiral track extending from the innermost track to the outermost track, covering ...
en.wikipedia.org/wiki/Optical_disk
- use tiny optically reflective particles to store data. A laser is used to read the reflective bits, and write data. Unlike CD-ROM, which is read-only, most optical disc systems are writable.
mindwrap.com/infoburbs/infoburbs.html
- ,ç,Á a computer data storage disk used primarily for large amounts (GB) of data.
www.medstrat.com/Glossary.html
- Storage device that can hold over 17 gigabytes of data which is an equivalent of several million typewritten pages. Lasers are used to record and read data on the disk. The two basic types of optical disks are compact disks (CD's) and digital versatile or video disk (DVD's).
ocw.kfupm.edu.sa/user071%5CMIS105010203%5CGlossary/O.htm
- A data storage medium that utilises laser technology to read information. CD-ROMs and WORM (Write Once Read Many) are examples of optical disks.
www.scotsmist.co.uk/glossary_o.html
- A rigid medium, generally polycarbonate substrate coated with a reflective aluminum layer, that stores information (such as audio, video or data) as digital bits in the form of variations in the stored data. Learn more about Optical Disk...
www.timbercon.com/Fiber-Optic-Glossary/alphabet-process.html
- is a high-capacity storage medium that is read by a laser light (CD/DVD's)
www.catawbacountync.gov/depts/itc/computerterm.asp
- A storage medium read by a laser beam that can store several hundred megabytes of data. CD-ROMs are optical disks that can be read but cannot be ...
www.wiley.com/college/busin/icmis/oakman/outline/glossary/alpha/glos_o.htm

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